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OVERVIEW OF PROGRAM REVIEW AND PLANNING FOR INSTRUCTIONAL PROGRAMS

Program Review and Planning is about evaluating and assessing programs and documenting plans for improving student success rates. Through review of and reflection on key program elements, Program Review and Planning identifies program strengths and strategies necessary to improve the academic discipline, program, and/or services to support student success.

The College also uses Program Review and Planning as the conduit to request resources (human, technology, facilities and funding) to further help improve and support programs.

BASIC PROGRAM INFORMATION

Academic Year

2021-2022

Are you completing a comprehensive or annual PRP?

Annual

Division Name

Mathematics, Science and Engineering

Department Name

Mathematics

Department Chair Name

Craig Chamberlin

Discipline Name

Mathematics (MATH)

Department Chair email

cchamberlin@palomar.edu

Please list the names and positions of everyone who helped to complete this document.

Craig Chamberlin - Chair

Kelli Miller - ADA

Tracy Johnston - Math Faculty and SLO Facilitator

Cindy Anfinson - Math Faculty and Title V/STEM Activity Director

Fari Towfiq - Math Faculty and Math Center Director

Mathews Chakkanakuzhi - Math Faculty

Website address for your discipline<https://www2.palomar.edu/pages/math/>**Discipline Mission statement**

The mission of the Palomar College Mathematics Department is to provide an environment where a diverse student body can learn and become competent users of mathematics and mathematical applications. Moreover, the department will contribute to the development of students as mathematical thinkers, to continue to grow in their chosen professions, and to be successful after transferring to a college or university.

In pursuing this mission, primary departmental functions are the development, dissemination, and application of mathematical knowledge in the areas of mathematics and statistics. We will serve students who are STEM majors and minors, general education students, at both basic skills and transfer levels.

In fulfilling this mission, the department creates an environment where the faculty can continue to grow as teachers and scholars, while providing public and professional service.

(click here for information on how to create a mission statement)

Does your discipline have at least one degree or certificate associated with it?

Yes

Are any of your programs TOP coded as vocational (CTE/CE)?

No

List all degrees and certificates offered within this discipline.

Associate in Science in Mathematics for Transfer

Associate in Science in Mathematics

BASIC PROGRAM INFORMATION: FACULTY AND STAFFING RESOURCES

In this section, you will identify how many faculty and staff support your discipline's programs. This information is considered when you request permanent staff and faculty hires. It is also useful as you evaluate your program and the human resources and talent you have to support our students.

To help you answer questions in this section, you will need the two links below. An arrow will appear in the spreadsheet pointing to the data you will enter.

1) **Permanent Faculty and Staff Count**

2) **FTEF LINK**

How many permanent or full-time faculty support your discipline (program)?

29

For this past fall semester, what was your Full-time FTEF assigned to teach classes?

24.63

For this past fall semester, what was your Part-time FTEF assigned to teach classes?

23.47

List the classified and other permanent staff positions that support this discipline.

Kelli Miller - ADA

List additional hourly staff that support this discipline and/or department

PROGRAM INFORMATION

In this section, you are asked to consider and evaluate your programs, including their program learning outcomes, the annual number of completions, goals for completions, and enrollment and efficiency trends.

PROGRAM LEARNING OUTCOMES

Begin this section by reviewing the Program Review reports for programs and courses in **Nuventive Improve** (TracDat). All active course and program learning outcomes should be systematically assessed over a 3-year cycle. First, look at program learning outcomes.

- **Program** = Leads to a degree or certificate
- **Discipline** = A group of courses within a discipline

*Programs will be able to complete program completion and outcome questions.

How well do your program's learning outcomes communicate the scope and depth of the degree/certificate offered?

The program's learning outcomes fully support the scope and depth of the degrees offered by the Math Department. Both degrees require students to know the fundamentals of calculus (derivatives and integrals) as well as using them for problem solving and for applications to other disciplines. The transfer degree also requires math a step beyond calculus, and the non-transfer degree requires programming skills. All these requirements are addressed by the PLOs

How do they align with employer and transfer expectations?

Employers expect our AS graduates to have calculus knowledge as well as programming and problem-solving skills that they know how to apply to other disciplines. Universities expect our AS-T graduates to have calculus knowledge and also linear algebra or differential equations knowledge as part of the traditional calculus sequence so they can continue with their bachelor's degree studies. Our PLOs are well-aligned with those expectations.

Describe your program's plan for assessing program learning outcomes.

The courses required for each degree have student learning outcomes that are assessed every three years. Those courses are mapped to the program learning outcomes, which means the PLOs are also assessed every three years.

Summarize the major findings of your program outcomes assessments.

1. The AS-T Program has five PLOs: Derivatives, Integrals, Problem Solving, Linear Algebra or Differential Equations, and Other Uses of Mathematics. Four of the five had very good assessment results: 70 to 99 percent of the students who took the assessment were able to complete the work at the passing level or higher. The one outcome that was below this was Integrals, which had 66% of the students showing competency. While that was close to what we consider acceptable, we recognize that the assessment was done during the pandemic, and we expect the results to improve once life returns to normal.

The AS Program has these five PLOs: Derivatives, Integrals, Problem Solving, Programming, and Other Uses of Mathematics. It had similar results in that four of the five had very good assessments, also in the 70 to 99 percent competency range. It, too, had the lower value of 66% for the Integrals, which we believe is a result of the pandemic.

PROGRAM COMPLETIONS

Student success is at the core of what we do in assisting students in achieving their goals.

The Chancellor's Office Vision for Success stresses the importance of Program Completion as a major goal for our students. In addition, transfer and career readiness are key components of Palomar College's mission statement. This year, our funding formula has also changed reflecting this emphasis, providing additional funding as a function of the number of completions.

In this section, you will reflect upon the number of completions students earned for EACH degree/certificate you offer. As required for accreditation, you are also asked to set a standard which represents the lowest acceptable number of completions and a stretch goal for increasing the number of awards.

Link to **Program: Completions**

Copy and paste five years of completion data for each of your discipline's degrees and certificates.

Row Labels 2015-16 2016-17 2017-18 2018-19 2019-20 2020-21

AA/AS

Associate in Science Degree 7 8 4 14 5 6

Associate in Science Degree for Transfer 12 27 25 51 55 46

AA/AS Total 19 35 29 65 60 52

Grand Total 19 35 29 65 60 52

Have your program completions Increased, decreased, or stayed the same over the last 5 years?

Stayed the same

What factors have influenced your completion trends?

There was not an adequate choice for the oscillating trend in completions over the last 5 years, so I chose "Stayed the same."

Flexible course schedules, including offerings in the mornings, afternoons, and evenings, help students stay on track. In pre-Covid times, the hiring of quality support staff and tutors in our Mathematics Learning Center and Saturday hours in the Mathematics Learning Center have allowed the students to get the quality help that they need with their mathematics courses

Our accrediting body, ACCJC, and the Federal Department of Education requires that colleges establish standards and goals for student success and completion.

A program-set standard for completion represents the lowest number of program completion you deem acceptable for your program. In other words, if you were to notice a drop below the set standard, you would seek further information to examine why this occurred and strategies to increase completions.

A program stretch goal for completions is the number of completions you aspire to award for each program in your discipline.

To determine your stretch goal, consider the number of annual completions you typically award over time, then consider strategies or efforts you are making to increase completions in your program. Then identify the NUMBER you want to set as your goal.

Program Information Summary

In this section you are asked to evaluate your programs by considering their program learning outcome assessments, the annual number of completions, goals for completions, enrollment and efficiency trends and any other internal or external factors that had an impact on your program.

What factors have contributed to the success of your program(s)? Describe how they have contributed.

Flexible course schedules, including offerings in the mornings, afternoons, and evenings, help students stay on track. In pre-Covid times, the hiring of quality support staff and tutors in our Mathematics Learning Center and Saturday hours in the Mathematics Learning Center have allowed the students to get the quality help that they need with their mathematics courses.

What factors have presented challenges for your program(s)? Describe the impact of these challenges.

The major challenge over the past year and a half has been remote teaching due to the pandemic. Enrollment is way down and so, not surprisingly, the number of completions has dipped over the last year.

COURSE INFORMATION

In this section, you will review how students perform in the courses you offer as part of your program. The Chancellor's Office Vision for Success stresses the importance of reducing equity gaps through faster improvements of underrepresented groups.

Data are provided to help you examine differences in course success rates (C or better) across student demographic categories (e.g., gender) and course type (e.g., face-to-face, online).

After you complete your review of course success data, you are asked about the assessment of student learning outcomes at the course level, progress you have made in these assessments, and changes you have implemented as a result/

COURSE SUCCESS AND RETENTION

ACCJC also requires that colleges establish institutional and program level standards and stretch goals for course success rates.

Program-set standards for course success rates represent the lowest success rate deemed acceptable by your discipline. In other words, if you were to notice a drop below the rate, you would seek further information to examine why the drop occurred and strategies to address the rate. The College's institution-set standard for course success rates is 70%

Program-set stretch goals for course success rates represent the success rates you aspire your students to achieve.

Link to Course Information

The data includes overall success (% C or better) and retention rates (% No Ws) . The data tables include course rates by gender, age, ethnicity, special population, location, and modality (You can access the Student Equity Plan on the SSEC website <https://www2.palomar.edu/pages/ssec/>)

What is your program's standard for Discipline COURSE Success Rate?

48.0%

Why did you choose this standard?

Math is a very difficult subject for a vast majority of the population. It is, perhaps, the only subject in which it is socially acceptable to fail a class. Students plan on failing. With these conditions, it would be a great feat to even break the 60% mark. Furthermore, multiple measure placement may be placing students too high, causing lower success rates.

What is your stretch goal for course success rates?

55.0%

How did you decide upon the goal?

We think that our rate should be higher than the state average of 53% (source: https://datamart.cccco.edu/Outcomes/Course_Ret_Success.aspx as of academic year 2020-21).

COURSE STUDENT LEARNING OUTCOMES (SLOs)

Summarize the major findings of your course level student learning outcomes assessments.

A majority of the SLOs assessed with a result of 70% student success or higher.

Several of the results that were lower were regarding affective domain as now taught in our new support classes. We believe this shows that our professors are still learning how to teach the affective domain skills and also how to assess them.

We also attribute many of the lower results to the stress and chaos of the pandemic. Students were not as engaged as they usually were. Often the sample size was very small.

We look forward to getting "back to normal" by the next round of assessments so we can have a more realistic view of student achievement.

Excluding courses that haven't been offered in the last three years, confirm that all of your courses have been assessed in the last three years.

No

If you answered no, please explain.

3. All courses have been assessed in the last three years except the following:

Math 11 and Math 110: Math 11, which is a new class, was created about three years ago. It is an AB705 support class to Math 110. Both it and Math 110 were scheduled to be assessed in Fall 2020 but, due to the chaos and stress of the pandemic, it was put off. Then there was a miscommunication about the assessment during Spring 2021, resulting in the assessment not being done. They both will be assessed this semester (Fall 2021).

Math 20: This is an AB705 support class to Math 120, and was created about 3 years ago. It will be assessed this semester to put it in sync with Math 120. (Math 120 was assessed within the last three years.)

This section is intentionally blank for annual PRPs. Please click "Next" to continue.

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CAREER AND LABOR MARKET DATA

The Chancellor's Office Vision for Success stresses the importance of increasing the percent of exiting students who report being employed in their field of study. It is important for us to consider how all of our programs connect to future careers.

Go to this website <https://www.onetonline.org/> and enter your discipline in the bubble on the top right for ideas about potential occupations. Click on an example to see more detail.

What kinds of careers are available for people who complete your programs (and/or transfer)? (Refer to link above) Are there any new or emerging careers? If so, how would the new or emerging careers impact your future planning?

Students who get our AS-T or AS degrees are likely pursuing careers in STEM and/or education.

With additional training, there are various other career paths available to those with an A.S. Math degree. These include accounting, finance, business, health care, and insurance.

What are the associated knowledge, skills, abilities (KSA's) needed for the occupations listed above? (click examples in the link above to get ideas)

For STEM fields, students obviously need to have a broad knowledge of both theory and practice in applying statistics, calculus, and linear algebra to analyze ideas and data.

For other career paths, students need to have a basic knowledge algebra, statistics, and calculus to analyze numerical data.

How does your program help students build these KSA's?

We offer courses (precalculus, calculus, linear algebra, and statistics) that teach these skills.

Work Based Learning

Applied and work-based learning (WBL) allows students to apply classroom content in professional settings while gaining real-world experience. WBL exists on a continuum that reflects the progress of experiences from awareness-building to training. Students often cycle back through the continuum many times throughout college and throughout their career. Faculty play a critical role in ensuring these experiences are embedded into curriculum and support learning.

Have you incorporated work based learning (work experience, internships, and/or service learning) into your program?

No

Do you want more information about or need assistance integrating work-based learning into your program?

No

How do you engage with the community to keep them apprised of opportunities in your program?

We sometimes meet or communicate with officials from high schools and other colleges to discuss shared issues. For example, in 2019 we met with the Math Department Chair from Cal state San Marcos, along with faculty from Mira Costa Community college, to discuss issues that affect of articulation and our AS-T degree.

Also, Palomar College's Highway 78 Math Fields Day is a yearly event that celebrates mathematics and gives students the opportunity to show off their math skills and win prizes in the process. In 2021, students registered at the event came from San Diego City College, San Diego Mesa College, San Diego Miramar College, UC Irvine, UCSD, San Marcos High School, Westview High School, San Dieguito Academy High School, Escondido High School, La Costa Canyon High School, Rancho Buena Vista High School, Torrey Pines High School, Great Oak High School, Davidson Academy High School, Sage Creek High School, Mission Hills High School and even Homeschooled High School. We saw strong representation from female students and minoritized student populations at the 2021 event.

Program Goals

In the previous sections, you identified opportunities for improvement. Using these opportunities, develop 3-year **SMART goals** for your department. Goals should be Specific, Measurable, Attainable, Relevant, Time-Specific. Ensure your goals align with the mission of your department and/or [the College's Strategic Plan](#).

Please list all discipline goals for this three-year planning cycle. [Click here for previous PRPs and goal information](#).

If you require any additional resources beyond your exiting budget, please be sure to request those resources in the next section titled "Resources".

Goals

Goal 1

Brief Description

Improve the number of students who successfully complete a college level mathematics course and comply with AB705.

Is this a new or existing goal?

Existing

Goal Status

How will you complete this goal?

1. Funnel non-STEM students into classes other than Intermediate Algebra, which does not fit their needs or interests. This will require dialing down the number of Math 56/60 courses offered and increasing offerings of transfer level courses with support. To this end, we suggest implementing the following:

- A continuing communications campaign with students regarding their math placement and how to select an entry-level mathematics course.
- Common advising on entry-level mathematics courses developed collaboratively between counseling and math. This requires common advising sheets used by faculty/counselors/advisors and given to students. The Department plans to meet with Counseling in the fall to discuss advising standards and the dissemination of this information to high school counselors.
- A Student Services campaign to reach out to students with undecided/undeclared majors: these students need major and career counseling before signing up for a math class. Too many of these students end up in Math 56/60 and fail. Our instructors see this occurring again and again.

2. The Math department needs support from IRP to accomplish its goal from item 1. In particular, we need:

- Data requested from IRP to assess the full impact of these scheduling modifications. For example:
 - o Data on the number of new students who have passed Algebra II in high school versus how many have not.
 - o Data on the number of expected STEM majors.
 - o Data on the number of students entering fall cohorts that match each math pathway (Elementary Ed – Humanities & Soc/Behavioral Sciences – Business – STEM).
 - o Data on the number of students with undecided majors who take Math 56/60 to keep their options open.

3. If the above plan is successful to get students in classes that best fit their needs, it should do much to increase math success rates which on average have gone down over the last few years. In addition, we plan to:

- Continue (and possibly expand) a 16-hour PD training program for best practices in teaching classes that come with support (need funding support for expansion).
- PD training for grading with an equity mindset.
- A campus wide campaign to encourage our students to take non-credit review classes and workshops designed to get them up-to-speed before classes begin.
- Continue to have faculty members attend CAP workshops.
- Discussing increasing math throughput at fall department meetings.

Outcome(s) expected (qualitative/quantitative)

We hope to see mathematics throughput rates at or near the 2019 CA statewide throughput rate of 50% (RP Group Research).

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?

It will allow us to pursue our primary departmental functions, which are the development, dissemination, and application of mathematical knowledge in the areas of mathematics and statistics. We will serve students who are STEM majors and minors, general education students, at both basic skills and transfer levels.

Expected Goal Completion Date

8/22/2022

Goal 2**Brief Description**

New Building

Is this a new or existing goal?

Existing

Goal Status**How will you complete this goal?**

That is up to the powers-that-be to change the culture of putting one of the largest departments in the district last.

Outcome(s) expected (qualitative/quantitative)

A new building would facilitate a more cohesive math department that is ready to teach. At present, our faculty have to haul around calculators, document cameras, and laptops from building to building. Valuable instruction opportunities are lost due to the time it takes setup classrooms for instruction. Also, a new building would enable students to find their teachers more easily. They wouldn't have to track them down like they do currently, as their offices are located in several different buildings. Most important is the need for all math faculty to be located together in one space as well as have the Math Center embedded within the department. This will result in more communication, more collaboration and help us improve the way we educate and serve our students.

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?

A new building will result in more communication, more collaboration and better organization.

Expected Goal Completion Date

2/1/2030

Goal 3**Brief Description**

Encourage Major students to pursue an AST in Mathematics.

Is this a new or existing goal?

New

How will you complete this goal?

Faculty, in coordination with counselors and administrators, will work toward increased communication to potential STEM students about the benefits of an AST degree..

Outcome(s) expected (qualitative/quantitative)

The benefits to students earning an AA-T or AS-T include:

- Guaranteed admission into a CSU.
- Students can earn a Bachelor's degree in 60 units upon transfer, including any lower division General Education (GE) courses, all upper division GE courses, all major and elective course requirements.
- CSUs are prohibited from requiring students to repeat courses that are similar to those completed at the community college for the associate degree for transfer.

(Source: http://www.fullerton.edu/aac/current_students/transfer_students/aat_ast.php)

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?

This goal aligns well with the part of the Math Department's mission statement that says "...the department will contribute to the development of students as mathematical thinkers, to continue to grow in their chosen professions, and to be successful after transferring to a college or university." It also aligns nicely with VFS Goal 1: "Palomar College will increase among all students, the number who earned an associate degree or associate degree for transfer..."

Expected Goal Completion Date

5/19/2023

Goal 4**Brief Description**

Reduce the class cap on our pre-transfer level courses to 32

Is this a new or existing goal?

Existing

Goal Status**How will you complete this goal?**

We need to convince the union and the district that this is best for our students.

Outcome(s) expected (qualitative/quantitative)

We expect the success rates to improve as instructors will have additional time to work with students and use active learning techniques. The CONFERENCE BOARD OF THE MATHEMATICAL SCIENCES states on its website "we call on institutions of higher education, mathematics departments and the mathematics faculty, public policy-makers, and funding agencies to invest time and resources to ensure that effective active learning is incorporated into postsecondary mathematics classrooms." Inside Higher Ed's website states, "instructors in small (10-14) and medium (15-34) classes are more likely to involve students in hands-on projects and real-life activities, assign projects that require original or creative thinking, form teams or discussion groups to facilitate learning, and ask students to help each other understand concepts or ideas." Furthermore, they state "The evidence found in this analysis unequivocally leads to the conclusion that class size has a negative impact on the student-rated outcomes of amount learned, instructor rating, and course rating." We need smaller class sizes.

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?

It will allow us to pursue our primary departmental functions, which are the development, dissemination, and application of mathematical knowledge in the areas of mathematics and statistics. We will serve students who are STEM majors and minors, general education students, at both basic skills and transfer levels.

Expected Goal Completion Date

5/31/2022

Goal 5**Brief Description**

A combined, fully funded Math and STEM Center

Is this a new or existing goal?

Existing

Goal Status

How will you complete this goal?

We need the support of the district to help us achieve this goal. Data provided by IRP shows that the Math Learning Center contributes to the success of Palomar College math students. Over the last 5 years, students who receive Math Center tutoring have an average success rate of 60.7% compared to 55.2% for those math students who do not receive tutoring. Thus, the Math Center directly supports the Vision for Success by helping to increase the number of completions and transfers (goals 1 and 2 of VFS) and potentially decreasing the number of units that they take (goal 3 of VFS). Furthermore, the Math Center runs a high-quality tutoring program with a math instructor always on duty, a dedicated and knowledgeable faculty coordinator, and CRLA-trained tutors, all of which are needed to decrease equity gaps in mathematics and thereby help the College achieve its AB705 and equity goals. The Chancellor's Office also calls for pairing "...high expectations with high support." The Math Center is one of the necessary supports to help students be successful in mathematics. Combining the Math and STEM Centers will create a more efficient use of staff and space and increase equitable access and completion to underrepresented groups in STEM and Math.

Outcome(s) expected (qualitative/quantitative)

We can continue to provide a vital service to our students. Furthermore, our director of the MLC can actually spend some time with students instead of running around the campus begging for funding..

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?

It will allow us to pursue our primary departmental functions, which are the development, dissemination, and application of mathematical knowledge in the areas of mathematics and statistics. We will serve students who are STEM majors and minors, general education students, at both basic skills and transfer levels.

Expected Goal Completion Date

8/22/2022

Goal 6**Brief Description**

We need 40% release time for an AB705 Coordinator

Is this a new or existing goal?

New

How will you complete this goal?

This will need to be approved by the district. Typically, we estimate the backfill on a 20% faculty release time position at \$5500 per semester. So, this position should be estimated at \$11,000 per year.

Outcome(s) expected (qualitative/quantitative)

Continued work to fulfill the legal requirements of AB705, including training of faculty in teaching corequisite classes. Currently, this is paid for by a grant that ends in May 2022.

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?

AB705 is designed to give students the best opportunity to complete a transfer level math class in their first year of college. This aligns with our mission statement to ..."provide an environment where a diverse student body can learn and become competent users of mathematics and mathematical applications. Moreover, the department will contribute to the development of students as mathematical thinkers, to continue to grow in their chosen professions, and to be successful after transferring to a college or university."

Expected Goal Completion Date

5/1/2024

Goal 7**Brief Description**

Graphing calculators sets in every classroom.

Is this a new or existing goal?

New

How will you complete this goal?

We'll need financial support from the district. (I didn't list this as a one-time budget item because it is a new request, and I haven't had time to get a cost estimate.)

Outcome(s) expected (qualitative/quantitative)

This would cut a huge expense for students, some of whom can't afford their own calculators. The use of calculators can enrich the learning experience by allowing the study of more realistic problems.

How does this goal align with your department mission statement, the college strategic plan, and /or Guided Pathways?

Calculators facilitate the study of more realistic applications of math. Therefore this goal aligns with our mission to "...provide an environment where a diverse student body can learn and become competent users of mathematics and mathematical applications."

Expected Goal Completion Date

8/23/2021

RESOURCES

Congratulations! You are nearing completion. In this section, you will consider the resources you need to implement your three-year program review plan and/or address any findings from your assessment of your discipline.

The section is organized into the following four parts:

PART 1: Staffing Needs (Faculty and Additional Staff)

PART 2: Budget Review

PART 3: Technology and Facilities Needs

PART 4: One Time Request for Other Needs (NonTechnology Equipment, Supplies, Operating Expenses, Travel)

PART 1: STAFFING NEEDS

Requests for faculty will follow the prioritization process currently in place in IPC, and the IPC Subcommittee. Requests for new staff positions will be prioritized at the division level and reviewed at Exec.

Are you requesting additional full-time faculty?

Yes

NOTE: If you are requesting full-time faculty, you must go back to the Labor Market section of the form to complete that section. It is required when requesting additional faculty positions.

REQUEST FOR ADDITIONAL FULL-TIME FACULTY

Faculty Request 1

Title of Full-Time Faculty position you are requesting

Mathematics Instructor 1

How will this faculty position help meet district (Guided Pathways, Strategic Plan, Strategic Enrollment Management etc.), department and/or discipline goals? Please be sure to tie this back to your PRP goals and three year plan.

This position will help meet the district's Goal 4 from Strategic Plan 2022: "Attract, support, and engage a workforce to meet the needs of the College's diverse student body."

Furthermore, this position fits in with the District's Mission statement, by helping provide an engaging teaching and learning environment for students of diverse origins, experiences, needs, abilities, and goals. Our new instructor would support and encourage students who are pursuing transfer-readiness, general education, basic skills, career and technical training, aesthetic and cultural enrichment, and lifelong education. They would be committed to promoting the learning outcomes necessary for our students to contribute as individuals and global citizens living responsibly, effectively, and creatively in an interdependent and changing world.

Additional full-time instructors will mean higher quality mathematics instruction and improved student learning of mathematics through increased student/teacher contact,

Is there a scarcity of qualified Part-Time Faculty (for example: Specialized degree/experience, emerging/rapidly changing technology, high demand)?

According to the previous department chair, we continue to see a shortage of people with an MS in mathematics or statistics willing to teach adjunct. I see a lot of resumes listing engineering degrees, not mathematics degrees. There are very few people with mathematics degrees, and even fewer that want to work for \$35 per hour. By contrast, though, when we advertise a full-time position, we see plenty of applicants with the proper degree. We have 29 full-time faculty and about 40 adjunct faculty, this semester.

Are you requesting this position for accreditation, regulatory, legislative, health and safety requirements? Please explain.

No.

Utilizing your PRP data, please summarize the discipline productivity, efficiency, and any regional career education needs for this discipline.

Over the last five years, The math program's yearly average of WSCH/FTEF is 548, which is well above the institutional goal of 525.

Is your department affected by faculty on reassigned time? If so, please discuss.

Out of the 29 full-time faculty, we typically lose 3 or 4 FTEF to re-assigned time. We are a large department and very involved in the college, so our loss to re-assigned time is usually quite high.

Faculty Request 2

Title of Full-Time Faculty position you are requesting

Mathematics Instructor 2 (statistician)

How will this faculty position help meet district (Guided Pathways, Strategic Plan, Strategic Enrollment Management etc.), department and/or discipline goals? Please be sure to tie this back to your PRP goals and three year plan.

This position will help meet the district's Goal 4 from Strategic Plan 2022: "Attract, support, and engage a workforce to meet the needs of the College's diverse student body."

We need a statistician to help us develop and maintain a robust data science and statistics programs. According to the U.S Bureau of Labor Statistics, statisticians and data scientists are two of the fastest growing occupations in America (source: <https://www.bls.gov/ooh/fastest-growing.htm>). Having a statistician on staff would help us keep our program relevant and help prepare our students to enter the workforce with high paying jobs.

Is there a scarcity of qualified Part-Time Faculty (for example: Specialized degree/experience, emerging/rapidly changing technology, high demand)?

According to the previous department chair, we continue to see a shortage of people with an MS in mathematics or statistics willing to teach adjunct. I see a lot of resumes listing engineering degrees, not mathematics degrees. There are very few people with mathematics degrees, and even fewer that want to work for \$35 per hour. By contrast, though, when we

advertise a full-time position, we see plenty of applicants with the proper degree. We have 29 full-time faculty and about 40 adjunct faculty, this semester.

Are you requesting this position for accreditation, regulatory, legislative, health and safety requirements? Please explain.

No.

Utilizing your PRP data, please summarize the discipline productivity, efficiency, and any regional career education needs for this discipline.

Over the last five years, The math program's yearly average of WSCH/FTEF is 548, which is well above the institutional goal of 525.

Is your department affected by faculty on reassigned time? If so, please discuss.

Out of the 29 full-time faculty, we typically lose 3 or 4 FTEF to re-assigned time. We are a large department and very involved in the college, so our loss to re-assigned time is usually quite high.

Are you requesting new Classified, CAST or AA positions?

Yes

REQUEST FOR ADDITIONAL CLASSIFIED, CAST, AA

PART 2: BUDGET REVIEW

Review your Budget/Expenditure reports for fiscal year 2019, 2020, 2021. Consider your three-year PRP plan.

Click on the link below to access directions to the *Available Budget Report* to complete this section.

[How to Request the Available Budget Report](#)

Reflecting on your three-year PRP plan, are there any budget considerations you would like your dean/supervisor to be aware of for the upcoming year?

No

NOTE: PARTS 3, 4 and 5 – TECHNOLOGY, FACILITIES AND OTHER NEEDS

1. One-Time Fund Requests. The college is implementing a process for prioritizing and allocating funds for one-time needs/requests tied to Program Review and Planning. Prioritization will take place through participatory governance in planning councils and the Budget Committee. Then, a recommendation will be made to Exec for funding of request utilizing various funding sources.

For more information about funding sources available, see [IELM BLOCK GRANT, LOTTERY, PERKINS AND STRONG WORKFORCE GUIDELINES](#).

Consider submitting one-time requests only if you have verified that you cannot fund the request using your general discretionary funds or other funds.

2. Technology and Facilities Review. From now on, ALL requests for technology will go through an institutional review process. If you request technology here, you will see a description of the process below.

PART 3: TECHNOLOGY AND FACILITIES NEEDS

Will you be requesting any technology (hardware/software) this upcoming year?

No

Part 4: Facilities Requests

Do you have resource needs that require physical space or modification to physical space?

Yes

Facilities Requests

Facility Request 1

What are you requesting?

Space for the Combined Math/Stem Center

What discipline PRP plan goal/objective does this request align with?

Goal #5: A combined, fully funded Math and STEM Center

What Strategic Plan 2022 Goal/Objective does this request align with?

1:3

Provide a detailed description of the facilities item or space requested. What is it, and why do you need it? Please be as descriptive as possible. Include in your description how the requested item aligns with your discipline's PRP goals, analysis of PRP data, SLO/SAOs.

The Combined Math/STEM Center will be one-stop-shop, where students can come to get tutoring help that they need. This aligns with our goal #1 to Improve the number of students who successfully complete a college level mathematics course and comply with AB705.

Over the last 5 years, students who receive Math Center tutoring have an average success rate of 60.7% compared to 55.2% for those math students who do not receive tutoring. Thus, the Math Center directly supports the Vision for Success by helping to increase the number of completions and transfers (goals 1 and 2 of VFS) and potentially decreasing the number of units that they take (goal 3 of VFS). Furthermore, the Math Center runs a high-quality tutoring program with a math instructor always on duty, a dedicated and knowledgeable faculty coordinator, and CRLA-trained tutors, all of which are needed to decrease equity gaps in mathematics and thereby help the College achieve its AB705 and equity goals.

Is there an associated cost with this request?

No

What impacts will this request have on the facilities/institution (e.g., water/electrical/ADA compliance)?

To be determined.

PART 5: OTHER ONE-TIME NEEDS

For more information about funding sources available, see [IELM BLOCK GRANT, LOTTERY, PERKINS AND STRONG WORKFORCE GUIDELINES](#). Please check with your department chair on the availability for this cycle.

Do you have one-time requests for other items (e.g., Non-Technology Equipment, Supplies, Operating Expenses, Travel) that your budget or other funding sources will NOT cover?

Yes

Requests

Item 1

What are you requesting?

CHEGG.COM SUBSCRIPTION

Estimated Amount of Request.

\$180.00

Will you accept partial funding?

No

Budget Category

422000

What PRP plan goal/objective does this request align with?

Allows faculty to monitor and curb student access to assessments

What Strategic Plan 2022 Goal/Objective does this request align with?

2:3

Provide a detailed description of the item requested. What is it, and why do you need it? Please be as descriptive as possible. Include in your description how the requested item aligns with your discipline's PRP goals, analysis of PRP data, SLO/SAOs.

Chegg.com is a website that gives students access to tests and other assessments used by professors. By having access to it, we can keep students honest. Here is there website address, where the cost is listed at \$14.95 per month: <https://www.chegg.com/promo/sohp>.

Please upload a copy of the quote, if available.

I confirm that all full-time faculty in this discipline have reviewed the PRP. The form is complete and ready to be submitted.

Yes

Enter your email address to receive a copy of the PRP to keep for your records.

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